

What Is Claimed Is:

1. A fuel injection quantity control device for limiting a fuel injection quantity so as to prevent vehicle speed from exceeding a set limit vehicle speed, this device comprising:

vehicle speed detection means for detecting the vehicle speed;
gear position detection means for detecting a gear position;
engine revolution speed detection means for detecting an engine revolution speed;

accelerator opening degree detection means for detecting an accelerator opening degree;

target acceleration value computation means for deriving a basic target acceleration value corresponding to the difference between the set limit vehicle speed and an actual vehicle speed from a map, finding in a map an upper limit value and lower limit value of the basic target acceleration value for each gear position, limiting the basic target acceleration value with the upper limit value and lower limit value, and determining a target acceleration value;

basic fuel injection quantity for vehicle speed limit computation means for determining a basic fuel injection quantity for vehicle speed limit by feedback computation from the difference between the target acceleration value determined with the target acceleration value computation means and the actual acceleration value;

accelerator required injection quantity computation means for computing an accelerator required injection quantity from the engine revolution speed and accelerator opening degree; and

vehicle speed limit injection quantity computation means for selecting the smaller of the basic fuel injection quantity for the vehicle speed limit and the accelerator required injection quantity and setting it as a fuel injection quantity for vehicle speed limit that will be actually injected into the engine.

2. The fuel injection quantity control device according to claim 1, wherein the target acceleration value computation means derives the basic target acceleration from the map in which a gear position also serves as a parameter in addition to the difference between the set limit vehicle speed and actual vehicle speed.

3. The fuel injection quantity control device according to claim 1, wherein the basic fuel injection quantity for vehicle speed limit computation means finds a proportional term and an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the basic fuel injection quantity for vehicle speed limit by adding up the proportional term and integral term.

4. The fuel injection quantity control device according to claim 2, wherein the basic fuel injection quantity for vehicle speed limit computation means finds a proportional term and an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the basic fuel injection quantity for vehicle speed limit by adding up the proportional term and integral term.

5. The fuel injection quantity control device according to claim 3, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for a proportional term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the proportional term by multiplying this coefficient for the proportional term by the difference.

6. The fuel injection quantity control device according to claim 4, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for a proportional term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the proportional term by multiplying this coefficient for a proportional term by the difference.

7. The fuel injection quantity control device according to claim 3, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the integral term by multiplying this coefficient for the integral term by the difference and adding up an old value to the obtained value.

8. The fuel injection quantity control device according to claim 4, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the integral term by multiplying this coefficient for the integral term by the difference and adding up an old value to the obtained value.

9. The fuel injection quantity control device according to claim 5, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the integral term by multiplying this coefficient for the integral term by the difference and adding up an old value to the obtained value.

10. The fuel injection quantity control device according to claim 6, wherein the basic fuel injection quantity for vehicle speed limit computation means finds from the map a coefficient for an integral term corresponding to the difference between the target acceleration value and actual acceleration value and the gear position and obtains the integral term by multiplying this coefficient for the integral term by the difference and adding up an old value to the obtained value.

11. The fuel injection quantity control device according to claim 1, wherein the accelerator required injection quantity computation means computes the accelerator required injection quantity by inputting the engine revolution speed and the accelerator opening degree into the map.

12. The fuel injection quantity control device according to claim 2, wherein the accelerator required injection quantity computation means computes the accelerator required injection quantity by inputting the engine revolution speed and the accelerator opening degree into the map.